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# On-site Wastewater Disposal in Subdivisions, Mobile Home Parks and Campgrounds

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Water Pollution Control Program & Environmental Assistance Office technical bulletin

2/2003

This technical bulletin is for **developers** of subdivisions, mobile home parks and campgrounds. You need to have your development plat approved by the Department of Natural Resources' Water Pollution Control Program prior to the sale of any lots if:

- your development will use on-site wastewater treatment, and
- your development will have seven or more lots, and
- your development will use lot sizes less than five acres.

## Background

The revised regulation *Disposal of Wastewater in Residential Housing Developments*, 10 CSR 20-6.030, has replaced the regulation *Disposal of Wastewater in Subdivisions*, 10 CSR 20-6.030 (<http://www.sos.state.mo.us/adrules/csr/current/10csr/10csr.asp>). The regulation governs on-site wastewater treatment systems and allowable lot sizes for new developments. This technical bulletin outlines the requirements of the regulation.

## How do I obtain approval of my development plat?

Submit a copy of the form "*Request for Approval under 10 CSR 20-6.030 Disposal of Wastewater in Residential Housing Developments*" to the department's Water Pollution Control Program at the address on the form. Include the following documents with the form:

- geohydrologic evaluation from the department's Geological Survey and Resource Assessment Division (GSRAD)
- soils report from a certified soil scientist
- plat map drawn to show individual lots, roads, existing wells and known easements
- USGS topographic map with the development area outlined
- USDA County Soil Survey soil map (if available) with development area outlined
- multiple family housing unit developments (**duplexes, town houses, condominiums, etc.**) - include an engineer's report prepared in accordance with 10 CSR 20-8.020

The Water Pollution Control Program will notify you of approval or disapproval of the wastewater disposal plans, usually within 90 days of the receipt of the application and required attachments.



## Request Form

"Request for Approval under 10 CSR 20-6.030 Disposal of Wastewater in Residential Housing Developments", MO 780-1706, can be obtained from the following sources:

- Water Pollution Control Program, (573) 751-1300
- Internet site: [www.dnr.state.mo.us/oac/forms/index.html](http://www.dnr.state.mo.us/oac/forms/index.html)
- Environmental Assistance Office, 1-800-361-4827.

## What are the lot size restrictions?

Housing developments with lot sizes smaller than 40,000 square feet (0.92 acres) and recreational developments with lot sizes smaller than 20,000 square feet (0.46 acres) **must provide centralized sewage collection and treatment.**

## Soil Absorption Systems

The minimum lot size for housing developments using on-site wastewater treatment with soil absorption systems is determined by comparing the minimum lot size stated in the GSRAD geohydrologic evaluation and the minimum lot size required for the soil conditions at the site. You must use the larger lot size of these two figures.

To determine the minimum lot size *due to soil conditions*, use the soils report information (soil structure, soil depth and percent slope) and Table 1 below.

**Table 1**  
**Minimum Lot Size for Soil Absorption Systems due to Soil Depth and Slope**

	Greater than 30" acceptable soil*	18"-30" acceptable soil* over a limiting layer	18"-30" acceptable soil* over bedrock	Less than 18" acceptable soil*
<b>0%-2% slope</b>	0.92 acres	2 acres	2 acres	3 acres
<b>3%-14% slope</b>	0.92 acres	1 acre	2 acres	3 acres
<b>15%-30% slope</b>	1 acre	2 acres	3 acres	5 acres
<b>31% slope +</b>	2 acres	3 acres	5 acres	5 acres

### \*Acceptable soil:

- all soil structures **except** strong platy or massive soil structure
- soil containing 50% or less coarse fragments (larger than 2mm)
- soil does not contain a limiting layer (a restrictive horizon, permanent or seasonal high water table)
- sites with less than 18 inches of acceptable soil must show that mitigation of the limiting soil condition is feasible and a soil absorption system will function properly
- sites with less than 12 inches of acceptable soil will not be approved unless the limiting condition is a high water table and the soil scientist determines that a water table lowering technique would be effective
- sites must have a suitable landscape position for on-site system

## Campgrounds

Recreational developments (campgrounds) can reduce the lot size found in Table 1 by one-half. Campgrounds must have restrictive lot covenants that prohibit continuous year round living and prohibit permanent structures. Include a copy of the restrictive covenants with your request for approval.

## Wastewater Lagoons

The minimum lot size for housing developments using on-site wastewater lagoons is 2.5 acres. The soil must be suitable for a lagoon and the slope must be less than 15 percent. There must be a minimum of four feet of soil, if natural soil is used as the liner.

## Important Note

The Missouri Department of Health and Senior Services (DHSS) or the local county on-site wastewater permitting authority regulates construction of on-site wastewater systems on individual lots. **Lot size approval by the department's Water Pollution Control Program does not guarantee that each individual lot will be approved for a soil absorption system by the county or DHSS.** Local ordinances may require larger lot sizes than those approved by the department's Water Pollution Control Program. Contact the local county or DHSS on-site wastewater permitting authority prior to finalizing the plat for your development. Obtain any required on-site sewage disposal construction permits prior to construction.

## How do I obtain a Geohydrologic Evaluation?

A geohydrologic evaluation of the site can be obtained from the department's Geological Survey and Resource Assessment Division. You need to submit a copy of the form "*Request for Geohydrologic Evaluation of Residential Housing Development (Subdivision)*" to GSRAD at the address on the form. The following information is needed to complete the form:

- legal description of the property
- total acreage of the development
- type of water supply proposed for the development
- sketch map or topographic map showing:
  - development boundaries
  - all known wells, springs, and sinkholes
  - all known caves, mines and roads
  - scale and north arrow

GSRAD should send you written results of the evaluation within 45 days of receipt of a complete request.

## Request Form

"*Request for Geohydrologic Evaluation of Residential Housing Development (Subdivision)*", MO 780-1690, can be obtained from the following sources:

- Geological Survey and Resource Assessment Division, (573) 368-2126
- Internet site: [www.dnr.state.mo.us/geology/geosrv/forms.htm](http://www.dnr.state.mo.us/geology/geosrv/forms.htm).
- Environmental Assistance Office, 1-800-361-4827

## How do I obtain a Soils Report?

The soils report must be prepared by a soil scientist as defined in 19 CSR 20-3.080. The Missouri Department of Health and Senior Services, (573) 751-6102 or 1-800-392-7245, maintains a list of certified soil scientists. Contact the Water Pollution Control Program Engineering Section at (573) 751-1300 to determine if the soil scientist you select meets the department requirements.

The soils report will contain soil profile descriptions (structure, texture, depth, etc.) and a topographical map showing slope categories. The soil scientist will evaluate the soil using observation pits dug by hand or by backhoe. Subdivisions with lot sizes less than two acres require one pit every five acres. Subdivisions with lot sizes greater than two acres require one pit every 10 acres.

## **Additional Information**

For more information call or write:

Missouri Department of Natural Resources  
Environmental Assistance Office  
P.O. Box 176  
Jefferson City, MO 65102  
1-800-361-4827 or (573) 526-6627  
(573) 526-5808 FAX  
[www.dnr.state.mo.us/oac/env\\_assistance.htm](http://www.dnr.state.mo.us/oac/env_assistance.htm)

Water Pollution Control Program  
P.O. Box 176  
Jefferson City, MO 65102  
1-800-361-4827 or (573) 751-1300  
(573) 751-9396 FAX  
[www.dnr.state.mo.us/wpscd/wpcp/homewpcp.htm](http://www.dnr.state.mo.us/wpscd/wpcp/homewpcp.htm)